

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claims 1-8 (canceled).

Claim 9 (new): A method of cutting a rare-earth alloy with a wire saw obtained by fixing abrasive grains on a core wire with a resin layer, the method comprising the step of moving the wire saw while a portion of the rare-earth alloy being cut by the wire saw is immersed in a coolant, which is mainly composed of water and has a surface tension of about 25 mN/m to about 60 mN/m at approximately 25°C, thereby cutting the rare-earth alloy; wherein

in the wire saw, an average distance between two of the abrasive grains, which are adjacent to each other in a length direction, is about 150% to less than about 400% of the average grain size of the abrasive grains, an average height of portions of the abrasive grains, protruding from the surface of the resin layer, is about 70% or less of the average grain size of the abrasive grains, and a thickness deviation percentage of the resin layer with respect to the core wire is about 40%.

Claim 10 (new): The rare-earth alloy cutting method of claim 9, wherein the average grain size D of the abrasive grains satisfies $20\mu\text{m} \leq D \leq 60\mu\text{m}$.

Claim 11 (new): The rare-earth alloy cutting method of claim 9, wherein the core wire has a diameter of about 0.12 mm to about 0.2 mm.

Claim 12 (new): The rare-earth alloy cutting method of claim 9, wherein the resin layer is made of one of a phenol resin, an epoxy resin and a polyimide resin.

Claim 13 (new): The rare-earth alloy cutting method of claim 9, wherein the step of moving the wire saw includes the step of moving the wire saw on a plurality of rollers, and each of the plurality of rollers includes a polymer layer on which a guide groove is provided, the guide groove has a pair of sloped surfaces, at least one of the sloped surfaces of the guide groove defines an angle of about 25 degrees to less than about 45 degrees with respect to a radial direction of the roller, and the wire is passed between the sloped surfaces of the guide groove.

Claim 14 (new): The rare-earth alloy cutting method of claim 9, wherein the rare-earth alloy is an R-Fe-B based rare-earth sintered alloy.

Claim 15 (new): The rare-earth alloy cutting method of claim 14, wherein the rare-earth alloy is an Nd-Fe-B based rare-earth sintered alloy.

Claim 16 (new): The rare-earth alloy cutting method of claim 9, wherein the wire saw is fed with a tension about 25 N to about 35 N while being moved to cut the rare-

earth alloy.

Claim 17 (new): The rare-earth alloy cutting method of claim 9, wherein the coolant is at least approximately 70 wt% water.

Claim 18 (new): The rare-earth alloy cutting method of claim 9, wherein a temperature of the coolant is about 15°C to about 35°C.

Claim 19 (new): The rare-earth alloy cutting method of claim 9, wherein a temperature of the coolant is about 15°C to about 35°C.

Claim 20 (new): The rare-earth alloy cutting method of claim 9, wherein the coolant has at least one of a surfactant, a synthetic lubricant, an antifoaming agent, a pH of about 8 to about 11, and a rust preventive material.

Claim 21 (new): The rare-earth alloy cutting method of claim 9, wherein the wire saw is made of one of a piano wire, Ni-Cr alloy, Fe-Ni alloy, W, Mo, and a bundle of nylon fibers.

Claim 22 (new): The rare-earth alloy cutting method of claim 9, wherein the abrasive grains are made of one of diamond, SiC, B, C and CBN.

Claim 23 (new): A method of cutting a rare-earth alloy with a wire saw obtained by fixing abrasive grains on a core wire with a resin layer, the method comprising the step of moving the wire saw while a portion of the rare-earth alloy being cut by the wire saw is immersed in a coolant, which is mainly composed of water and has a kinetic friction coefficient of about 0.1 to about 0.3 at approximately 25°C with respect to the rare-earth alloy, thereby cutting the rare-earth alloy; wherein

in the wire saw, an average distance between two of the abrasive grains, which are adjacent to each other in a length direction, is about 150% to less than about 400% of the average grain size of the abrasive grains, an average height of portions of the abrasive grains, protruding from the surface of the resin layer, is about 70% or less of the average grain size of the abrasive grains, and a thickness deviation percentage of the resin layer with respect to the core wire is about 40%.

Claim 24 (new): The rare-earth alloy cutting method of claim 23, wherein the average grain size D of the abrasive grains satisfies $20\mu\text{m} \leq D \leq 60\mu\text{m}$.

Claim 25 (new): The rare-earth alloy cutting method of claim 23, wherein the core wire has a diameter of about 0.12 mm to about 0.2 mm.

Claim 26 (new): The rare-earth alloy cutting method of claim 23, wherein the resin layer is made of one of a phenol resin, an epoxy resin and a polyimide resin.

Claim 27 (new): The rare-earth alloy cutting method of claim 23, wherein the step of moving the wire saw includes the step of moving the wire saw on a plurality of rollers, and each of the plurality of rollers includes a polymer layer on which a guide groove is provided, the guide groove has a pair of sloped surfaces, at least one of the sloped surfaces of the guide groove defines an angle of about 25 degrees to less than about 45 degrees with respect to a radial direction of the roller, and the wire is passed between the sloped surfaces of the guide groove.

Claim 28 (new): The rare-earth alloy cutting method of claim 23, wherein the rare-earth alloy is an R-Fe-B based rare-earth sintered alloy.

Claim 29 (new): The rare-earth alloy cutting method of claim 28, wherein the rare-earth alloy is an Nd-Fe-B based rare-earth sintered alloy.

Claim 30 (new): The rare-earth alloy cutting method of claim 23, wherein the wire saw is fed with a tension about 25 N to about 35 N while being moved to cut the rare-earth alloy.

Claim 31 (new): The rare-earth alloy cutting method of claim 23, wherein the coolant is at least approximately 70 wt% water.

Claim 32 (new): The rare-earth alloy cutting method of claim 23, wherein a

temperature of the coolant is about 15°C to about 35°C.

Claim 33 (new): The rare-earth alloy cutting method of claim 23, wherein a temperature of the coolant is about 15°C to about 35°C.

Claim 34 (new): The rare-earth alloy cutting method of claim 23, wherein the coolant has at least one of a surfactant, a synthetic lubricant, an antifoaming agent, a pH of about 8 to about 11, and a rust preventive material.

Claim 35 (new): The rare-earth alloy cutting method of claim 23, wherein the wire saw is made of one of a piano wire, Ni-Cr alloy, Fe-Ni alloy, W, Mo, and a bundle of nylon fibers.

Claim 36 (new): The rare-earth alloy cutting method of claim 23, wherein the abrasive grains are made of one of diamond, SiC, B, C and CBN.